

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Quad Graphics, Inc.

Georgia Manufacturing Extension Partnership

Quad/Graphics Adopts Lean Enterprise Techniques to Cut Set-up Time, Increasing Sales and Saving Jobs

Client Profile:

Quad/Graphics' facility in The Rock, Georgia, employs about 500 people and produces catalogs and magazines for distribution in the Southeast and nationally. The company was founded in 1971 in Pewaukee, Wisconsin, and has 9 print production facilities. The plant in The Rock received the Georgia Governor's Award for a 10-Year Commitment to Workplace Excellence in September 2001 and was named Time Inc.'s 2002 and 2003 Printer of the Year for its production of Time, Sports Illustrated, Entertainment Weekly, and People magazines.

Situation:

When the president of high-tech printer Quad/Graphics decided to implement lean enterprise techniques across all nine of the company's printing facilities, its Georgia location chose to use a 30-year-old method pioneered by Shigeo Shingo, a Japanese manufacturing expert. Shingo developed a single minute exchange of dies (SMED) when he cut the set-up time on a thousand-ton press at Toyota from four hours to three minutes. Also known as set-up reduction, SMED is a cycle time reduction process that focuses on eliminating or reducing the physical, material and machine resources required to set up a piece of equipment. To implement the lean enterprise technique, management at Quad/Graphics' facility at The Rock called on experts at Georgia Tech's Economic Development Institute (EDI) of the Georgia Manufacturing Extension Partnership (Georgia MEP), a NIST MEP network affiliate.

Solution:

Project Manager Derek Woodham, along with lean specialists Sam Darwin, Tara Morris and Paul Todd, conducted three-day SMED training sessions that focused on Quad/Graphic's equipment which included press and finishing equipment. During the training, facilitators assembled a set-up reduction team that included personnel from inventory control, press, finishing, administration and imaging. The team recognized what defines set-up time, discussed the impact of set-up time on their operations and learned the reduction process by documenting and analyzing a complete set-up, brainstorming improvements and implementing ideas. The final aspect of the training session included testing improvements on an actual set-up and discussing how to standardize and sustain the improvements. As a result of implementing SMED, set-up time has been reduced by an average of 12 percent. Quad/Graphics will continue to strive for a 40 percent reduction. Benefits include an increase in annual sales and saved jobs. "Even though SMED is something you do to a machine, it was more valuable for us to educate the people through the process," says Tom Skurja, Quad/Graphics finishing manager. "The bottom line is that a machine is just a machine. It takes the people on the floor to understand a better way to do things." Skurja says another benefit to him as a manager has been the morale boost it has given his staff. "People have really enjoyed going through the process and being hands-on and having a say in how they do their business," he notes. "It gives them something to look forward to, and

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they realize they can make a difference on a daily basis in their operations."

Results:

- * Reduced set-up time by 12 percent.
- * Increased annual sales.
- * Saved jobs.
- * Improved employee morale.

Testimonial:

"A reduction in makeready time adds capacity, which will enable us to produce more work on the existing equipment."

Barbara Tyson, Plant Manager